

CLAIMS

1. A radio communication device, comprising:
5 a metallized housing;
 an antenna coupled to the metallized housing; and
 the metallized housing includes a antenna bandwidth enhancing slot
that at least increases the bandwidth of the antenna.
- 10 2. A radio communication device as defined in claim 1, wherein the
 metallized housing includes a flip section that can be placed in an open or
 closed position.
- 15 3. A radio communication device as defined in claim 2, wherein the antenna
 bandwidth enhancing slot is located on the flip section.
4. A radio communication device as defined in claim 1, wherein the antenna
 bandwidth enhancing slot comprises a substantially “L” shaped slot.
- 20 5. A radio communication device as defined in claim 4, wherein the “L”
 shaped slot includes a slot extension.

6. A radio communication device as defined in claim 1, wherein the antenna bandwidth enhancing slot causes surface currents located on the metallized housing to take multiple paths and thereby introduce multiple resonances.
- 5 7. A radio communication device as defined in claim 6, wherein the antenna comprises a helical and whip combination.
8. A radio communication device as defined in 6, wherein the antenna is electrically coupled to the metallized housing which is grounded.
- 10 9. A radio communication device as defined in 1, wherein the radio communication device comprises a cellular telephone.

10. A method for increasing the antenna bandwidth of an antenna found in a radio communication device, comprising the steps of:

providing a metallized housing for the radio communication device;

and

5 placing a slot on the metallized housing in order to cause electrical currents flowing in the metallized housing to take different paths in order to at least increase the bandwidth of the antenna.

11. A method as defined in claim 10, wherein the slot placed on the metallized housing comprises a substantially “L” shaped slot.

12. A method as defined in claim 11, wherein the “L” shaped slot includes a slot extension.

13. A method as defined in claim 10, wherein the radio communication device comprises a cellular telephone and the metallized housing includes a flip section that can move between an open position and a closed position.

14. A method as defined in claim 13, wherein the slot is located on the flip section.

15. A method as defined in claim 14, wherein a portion of the antenna is located external to the metallized housing.

16. A cellular telephone, comprising:

an antenna;

a metallized housing coupled to the antenna and having a movable
5 section that can be placed in an open or closed position; and

a slot located on the movable section, the slot causing any surface
currents found on the metallized housing during operation of the antenna to
take multiple electrical paths.

10 17. A cellular telephone as defined in claim 16, wherein the slot at least
increases the bandwidth of the antenna.

18. A cellular telephone as defined in claim 17, wherein the slot comprises a
substantially “L” shaped slot.

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19. A cellular telephone as defined in claim 16, wherein the slot allows for at
least two electrical paths for the surface currents to take.

20. A cellular telephone as defined in claim 18, wherein the “L” shaped slot
20 has a short arm and a long arm and the short arm is located along the long
arm’s length in such a location along the length of the long arm that dual
tuning of the antenna bandwidth can be achieved.

21. A radio communication device, comprising:

a electrically conductive housing;

an antenna coupled to the conductive housing; and

the conductive housing includes a slot that enhances the bandwidth of

5 the antenna.

22. A radio communication device as defined in claim 21, wherein the slot

causes electrical currents that are generated when the antenna is

transmitting electrical signals to follow different paths having different

10 lengths.

23. A radio communication device as defined in claim 22, wherein the

different lengths the electrical currents have to take results in broader

bandwidth for the antenna.